03-04-05

IDW
AT
2623

S/N 09/788,032 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Alexander Filatov	Examiner:	Le, Brian Q.
Serial No.:	09/788,032	Group Art Unit:	2623
Filed:	02/16/2001	Docket No.:	40002.0004US01
Title:	HOLISTIC-ANALYTICAL RECOGNITION OF HANDWRITTEN TEXT		

CERTIFICATE UNDER 37 CFR 1.10:
"Express Mail" mailing label number: EV544390299US
Date of Deposit: March 2, 2005

I hereby certify that this paper or fee is being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

By: Paula Egolf
Name: Paula Egolf

APPELLANT'S BRIEF ON APPEAL

MS: Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Brief is presented in furtherance of the Notice of Appeal filed January 2, 2005, from the final rejections to Claims 1-13 of the above-identified application, as set forth in the Office Action mailed July 14, 2004.

A check for $250.00 to cover the required small entity fee for filing this Brief is enclosed.

Applicant reserves the right to request an oral hearing by filing a separate request for an oral hearing with the appropriate fee within two months of the date of the Examiner's Answer in response to this Brief.

03/07/2005 HALI11 00000125 09788032
01 FC:2401 250.00 OP

This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. §41.37(c)):

I. REAL PARTY IN INTEREST

II. RELATED APPEALS AND INTERFERENCES (None)

III. STATUS OF CLAIMS

IV. STATUS OF AMENDMENTS

V. SUMMARY OF CLAIMED SUBJECT MATTER

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

VII. ARGUMENT

VIII. SUMMARY

IX. CLAIMS APPENDIX

X. EVIDENCE APPENDIX (None)

XI. RELATED PROCEEDINGS APPENDIX (None)

I. REAL PARTY OF INTEREST

The patent owner of the above-identified application is Parascript, LLC, of 6899 Winchester Circle, Suite 200, Boulder, Colorado, 80301, and is the real party of interest for the application in this appeal.

II. RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal:

☒ There are no such appeals or interferences.

☐ These are as follows:

III. STATUS OF CLAIMS

The status of the claims in this application are:

A. TOTAL NUMBER OF CLAIMS IN APPLICATION: Claims 1-13

B. STATUS OF ALL THE CLAIMS:

1. Claims cancelled: 14-28
2. Claims withdrawn from consideration but not cancelled: None
3. Claims pending: 1-13
4. Claims allowed: None
5. Claims rejected: 1-13

C. CLAIMS ON APPEAL: Claims 1-13

IV. STATUS OF AMENDMENTS

The present application was filed on February 16, 2001 with original claims 1-3. A preliminary amendment was filed on October 11, 2001 adding claims 4-28. A first, non-final Office Action was mailed on January 29, 2004 rejecting claims 1-28. An amendment was filed in response to the first, non-final Office Action on April 29, 2004, in which claims 1-3 were amended and claims 14-28 were canceled. A final Office Action was mailed on July 14, 2004 maintaining the rejections to claims 1-13 and declaring these rejections "final." An amendment was filed in response to the final Office Action on September 1, 2004, in which Applicant requested the cancellation of claims 1 and 4 as well as amendments to claims 3 and 5-8. An Advisory Action was mailed then mailed November 9, 2004, in which the September 1, 2005 Amendment was refused entry into the present application. In response to this Advisory Action, a Notice of Appeal was filed on December 2, 2004.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claims 1-3 in this appeal are generally directed to recognizing handwritten text using both holistic and analytical recognition approaches. See, e.g., FIG. 1 and page 1, lines 5-6. A concise explanation of each independent claim is provided below:

A. Independent Claim 1

Independent claim 1 recites an apparatus for recognizing a string of characters of hand written text in an image loaded in a computing system. See, e.g., Page 4, lines 3-4 and FIG. 1. The apparatus includes both a holistic recognition means (102, FIG. 1) and an analytical recognition means (104, FIG. 1). See, e.g., Page 4, lines 10-11. The holistic recognition means (102, FIG. 1) recognizes the string of characters as a whole and generates a first answer list (106, FIG. 1) and a segmentation list (103, FIG. 1). See, e.g., Page 4, lines 11-12 and 20-22. The first answer list (106, FIG. 1) contains a plurality of recognition answers for the string of characters in the image as well as an accompanying confidence value for each answer. See, e.g., Page 4, lines 24-27. The segmentation list (103, FIG. 1) contains segmentation information separating each character in the answers of the first answer list (106, FIG. 1). See, e.g., Page 4, lines 26-28 and Page 8, lines 18-21. The analytical recognition means (104, FIG. 1) uses the segmentation list (103, FIG. 1) to recognize a plurality of characters individually and thereafter generate a second answer list (108, FIG. 1) for the string of characters in the image. See, e.g., Page 5, lines 1-2. Like the first answer list (106, FIG. 1), the second answer list (108, FIG. 1) contains a confidence value for each answer. See, e.g., Page 5, lines 4-7. The apparatus recited in claim 1 also includes a means for finding (110, FIG. 1) the best recognition answer for the string of characters in response to creation of the first and the second answer list. See, e.g., Page 5, lines 7-9.

B. Independent Claim 2

Independent claim 2 recites a method performed in a computing system for recognizing cursive text to provide digital information corresponding to the cursive text. See, e.g., Page 7, lines 4-5 and FIG. 3. The method involves loading (302, FIG. 3) into the computing system an image of an input phrase of cursive text. See, e.g., Page 7, lines 1-2. The method further involves identifying features (304, FIG. 3) of the input phrase, wherein each feature represents at least a portion of a character in the input phrase. See, e.g., Page 7, lines 5-6. The features of the

input phrase are then matched (308, FIG. 3) against features of a plurality of reference phrases to generate a holistic answer list (311, FIG. 3) that contains reference phrases that are most similar to the input phrase along with accompanying confidence values. See, e.g., Page 7, lines 24-27. The confidence value for each reference phrase represents a measure of similarity between features of the input phrase and the features of that reference phrase. See, e.g., Page 7, lines 27-29. The method further involves constructing (313 and 314, FIG. 3) a character segmented features list (316, FIG. 3) from the features of the input phrase and from the holistic answer list (311, FIG. 3). See, e.g., Page 8, lines 18-21. The character segmented features list (316, FIG. 3) is a list of character feature sets segmented by characters in each answer from the holistic answer list (311, FIG. 3). See, e.g., Page 7, lines 18-21. The method then translates (306, FIG. 3) the image of the input phrase into images of characters segmented according to answers in the holistic answer list (311, FIG. 3) based upon the character segmented features list (316, FIG. 3). See, e.g., Page 8, lines 24-26.

The method according to claim 2 also involves analytically recognizing (320, FIG. 3) characters in the input phrase from the images of characters segmented according to answers in the holistic answer list (311, FIG. 3) to generate an analytical answer list (328, FIG. 3) containing analytical answers for the input phrase. See, e.g., Page 9, lines 3-7. Each analytical answer is associated with a confidence value representing the measure of similarity between characters in the analytical answer and characters in a reference phrase. See, e.g., Page 9, lines 7-8. Finally, this method involves finding (332, FIG. 3) the best recognition answer from the answers on both the holistic answer list (311, FIG. 3) and the analytical answer list (328, FIG. 3). See, e.g., Page 9, lines 13-15.

C. Independent Claim 3

Independent claim 3 recites a method for recognizing an input word of handwritten text in an image provided to a handwritten character recognition system. See, e.g., Page 7, lines 4-5 and FIG. 3. The method involves identifying (304, FIG. 3) from the input word image an input string of metastrokes, with each metastroke representing a portion of an alphanumeric character in the text. See, e.g., Page 7, lines 5-6. The input string of metastrokes is then stored as character feature images. See, e.g., Page 7, lines 9-12. The method according to claim 3 further involves comparing (308, FIG. 3), as a whole, the input string of metastrokes to a prototype

string of metastrokes for reference words to generate a first recognition answer list (311, FIG. 3) having a plurality of possible answers. See, e.g., Page 7, lines 13-16. Also, the method involves creating (313 and 314, FIG. 3) a plurality of character segmentation hypothesis based on character-segmented metastrokes for answers in the first recognition answer list (311, FIG. 3). See, e.g., Page 8, lines 18-21.

Next, the method translates (306, FIG. 3) each character segmentation hypothesis into character cutout images (318, FIG. 3) and the character cutout images (318, FIG. 3) are recognized to generate a plurality of character variants for each character position in the input word based on each segmentation hypothesis. See, e.g., Page 8, lines 23-26. The method then interprets (320, FIG. 3) the plurality of character variants of the input word for each segmentation hypothesis based on a vocabulary (326, FIG. 3) to generate a second recognition answer list (328, FIG. 3) having a plurality of possible answers. See, e.g., Page 9, lines 3-7. Finally, the method renders the recognition of the input word by finding (332, FIG. 3) the best answer from the first (311, FIG. 3) and second (328, FIG. 3) answer lists. See, e.g., Page 9, lines 13-15.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-6 and 8-12 are rejected under 35 USC 102(b) as being anticipated by a 1993 publication entitled, "A multi-classifier combination strategy for the recognition of Handwritten cursive Words," by Briggitte Plessis, Anne Sicsu, Laurent Heutte, Eric Menu, Eric Lecolinet, Olivier Debon and Jean-Vincent Moreau (hereinafter, "Plessis et al.").

Claims 7 and 13 stand rejected under 35 U.S.C. §103(a) as being obvious over Plessis et al.

VII. ARGUMENT

A. INTRODUCTION

In order for a reference to anticipate a claim under any sub-section of 35 U.S.C. §102, the reference must disclose each and every element as set forth in the claim. Verdegaal Bros. v. Union Oil Col. of California, 814 F.2d 628, 631 (Fed. Cir. 1987)). As argued in the following remarks, Plessis et al. does not disclose each and every element of any claim pending in the present application, and as such, Applicant respectfully contends that the instant rejections based thereon are improper and should be reversed on appeal. Prior to addressing the merits of these rejections, it is helpful to briefly describe the teachings of Plessis et al.

Plessis et al. is generally directed a "recognition scheme" for reading handwritten cursive words using three different word recognition techniques. Plessis et al., at Abstract. In particular, these three techniques are as follows: (1) holistic recognition (Plessis et al., at §II.1 Holistic Word Recognition, Page 643-644); (2) analytical recognition, i.e., recognition derived from segmentation, based on statistical classification (See Plessis et al., at §II.2 Segment/Recognize with statistical classifier, Page 643) and (3) analytical recognition based on neural network classification (See Plessis et al., at §III.3 Segment/Recognize with neural classifier, Page 643-644). In addition to briefly describing these three well-known recognition styles, Plessis et al. also introduces three strategies based on combining two or more of these styles to render what are referred to as "combination strategies." See Plessis et al., at §III. Combination strategies, at page 644-645.

The first-described combination strategy, which is referred to as "holistic driven recognition," involves using the holistic recognition method in combination with both analytical recognition methods. Plessis et al., at page 644. In this strategy, the holistic recognition method is used as "an input filter" for the analytical recognition methods. See Plessis et al., at page 644 and Figure 3. Specifically, the holistic recognition method examines an input word against a lexicon to trim down or limit the number of words in the lexicon that are evaluated against the input word by the analytical recognition methods. See Plessis et al., at page 644 and Figure 3. Thus, as shown in Figure 3, the holistic recognition method is used in this combination strategy simply to create a "filtered lexicon" for use by the two analytical recognition methods. The second-described combination strategy is referred to as "parallel processing" and involves

performing all three recognition techniques in parallel to create three different answer lists and then merging these answer lists to provide a final unique list, which is analyzed to render the recognition for an input word. See Plessis et al., at page 644. Finally, the third-described combination strategy is referred to as "semi-parallel processing" and involves combining the two analytical approaches to yield a single analytical answer list, which is then merged with a holistic answer list created in parallel fashion to the analytical answer list. See Plessis et al., at page 644. Only the "holistic driven recognition" is relevant to the final rejections in the present application.

B. REJECTIONS OF CLAIMS 1 and 4-8

Claim 1 recites, among other features, a holistic recognition means that generates not only a holistic (i.e., "first") answer list, but also a segmentation list. The segmentation list contains segmentation information separating each character in the answers of the holistic answer list. While Plessis et al. teaches an answer list generated using a holistic recognition method, Plessis et al. fails altogether to teach the holistic method also generating a segmentation list. To this end, Plessis et al. necessarily cannot anticipate claim 1 because claim 1 recites at least one limitation that is not taught in Plessis et al.

Through remarks made in response to both Office Actions as well as an interview conducted with the Examiner, Applicant has repeatedly argued the position that Plessis et al. fails to teach generation of such a segmented list. See Amendment dated April 29, 2004, at pages 9-10; Amendment dated September 1, 2004, at pages 7-9. Still, however, the Examiner has maintained throughout the progression of this prosecution that Plessis et al. teaches the generation of such a segmentation list by the holistic recognition method taught in Plessis et al. See Advisory Action dated November 9, 2004, at page 2; Final Office Action dated July 14, 2004, at page 2.

As support for this assertion, the Examiner cites Figure 3 and the first paragraph of page 644. Furthermore, the Examiner, in both the Final Office Action and the Advisory Action, comments on the lack of appropriate recitations in the claims embodying the argued limitations and consequently sets forth a "subjective" interpretation policy that, while the merits of this policy are questionable in the first place, still doesn't provide any factual support for finding the positively recited limitations of claim 1 in Plessis et al. See Final Office Action dated July 14, 2004, at page 2, and in particular, lines 5-11, which state:

> Regarding the argument on the bottom of page 9 of the Supplemental Amendment and Response, the Applicant argues that Plessis Reference does not generate character segmentation information in the holistic recognition engine and does not use the character segmentation information from the holistic recognition engine to segment characters in the input string for processing by the analytic recognition engine. *First, the Applicant does not clearly state this language in the claim. In addition, since the claim language is broadly claimed and therefore subjected to subjective interpretation.* (emphasis added).

First, rebutting the Examiner's assertion that claim 1 lacks the argued recitations, Applicant respectfully directs the Examiner and the Board to the explicit language of claim 1, which in relevant part recites, "*holistic recognition means* for recognizing the string of characters as a whole *and generating* a first answer list and *a segmentation list.*" (emphasis added). Thus, claim 1 indeed explicitly recites the holistic recognition means generating the segmentation list, contrary to the Examiner's assertion. Additionally, claim 1 positively recites the analytical recognition functionality in means-plus-function language, thereby invoking 35 U.S.C. §112, para. 6. Specifically, claim 1 recites an "*analytical recognition means responsive to the segmentation list for* recognizing a plurality of characters individually and *generating a second answer list.*" (emphasis added).

Therefore, properly construed, the term "analytical recognition means" embodies the analytical recognition structure in the specification that performs the recited recognizing and generating function in response to generation of the segmentation list. See Epcon Gas Sys. Inc. v. Bauer Compressors, Inc., 279 F.3d 1022, 1032 (Fed. Cir. 2002) ("Construction of a means plus function limitation requires identification of the function recited in the claim and a determination of what structures have been disclosed in the specification that correspond to the means for performing that function."). In view of this canon of claim construction promulgated by the Court of Appeals for the Federal Circuit, Applicant submits that claim 1 indeed recites use of the segmented list to analytically recognize an input word, again contrary to the Examiner's assertion.

Secondly, the Examiner's assertion that the broad construction of claim 1 is met by Plessis et al.'s teaching of the generation of a segmented list by a holistic recognition method is, quite frankly, completely without merit and unfounded. While this cited section of Plessis et al.

teaches performance of the holistic recognition method in conjunction with and even prior to either of the analytical methods (in order to make a more precise answer list by the analytical methods), Plessis et al. only teaches the use of the holistic recognition method in this regard to filter a vastly large lexicon of words such that the analytical methods can evaluate an input word against lexicon words having a relatively high probability of being an accurate recognition. Indeed, the output of the holistic method of Figure 3 is explicitly labeled a "filtered lexicon," which would not constitute a list of segmented answers according to any reasonable interpretation. To this end, Applicant respectfully submits that the Examiner's "subjective" interpretation is based on an erroneous reading of Plessis et al., the teachings of which are being applied to claim 1 entirely out of context.

For each of the reasons noted above, claim 1 is believed allowable over Plessis et al. Claims 4-8 each depend from claim 1 and thus incorporate at least those features of claim 1 described above as being deficient from the teachings of Plessis et al. As such, claims 4-8 are also believed allowable over Plessis et al. for at least the above-stated reasons. Applicant therefore respectfully requests reconsideration of the final rejections to claims 1 and 4-8 by the Examiner, and if such reconsideration is not granted, then alternatively, reversal of these rejections by the Board of Appeals.

C. REJECTIONS OF CLAIMS 2-3 and 8-13

Similar to claim 1, independent claim 2 recites, "constructing a *character segmented features list* from the features of the input phrase and *from the holistic answer list.*" (emphasis added). The character segmented features list is explicitly defined in claim 2 as being "a list of character feature sets segmented by characters in each answer from the holistic answer list," and thus embodies the "segmented list recited in claim 1. Even further, claim 2 explicitly recites, "analytically recognizing characters in the input phrase from the images of characters segmented *according to answers in the holistic answer list.*" (emphasis added). To this end, claim 2 recites each of those features argued above in connection with claim 1 as being deficient from Plessis et al., again, contrary to the Examiner's assertion in the Advisory Action and the Final Office Action. Thus, for at least those reasons that claim 1 is believed allowable over Plessis et al., so is claim 2 as well as claim 9, which depends from claim 2.

Likewise, independent claim 3 recites, "creating *a plurality of character segmentation hypothesis based on* character segmented metastrokes for answers in *the first recognition answer list*." (emphasis added). The plurality of character segmentation hypothesis represent segmented entries in the segmentation list (See specification, at page 8, lines 22-23) and, like claims 1 and 2, the segmentation hypotheses of claim 3 are derived based on a holistic answer list. Additionally, claim 3 specifically recites, "recognizing characters from the character cutout images and generating a plurality of character variants for each character position in the input word *based on each segmentation hypothesis*" and "interpreting the plurality of character variants of the input word *for each segmentation hypothesis* based on a vocabulary." (emphasis added). Thus, similar to claim 2, claim 3 also recites each of those features argued above in connection with claim 1 as being deficient from Plessis et al. For at least those reasons that claim 1 is believed allowable over Plessis et al., so is claim 3 as well as claims 10-13, which depend from claim 3.

Accordingly, Applicant respectfully requests reconsideration of the final rejections to claims 2-3 and 9-13 by the Examiner, and if such reconsideration is not granted, then alternatively, reversal of these rejections by the Board of Appeals.

VIII. SUMMARY

In view of the foregoing remarks, Applicant respectfully requests reversal of the outstanding final rejections to claims 1-13 based at least on the Examiner's failure to establish a prima facie case of obviousness with regard to any of these appealed claim in the present application.

In addition to the $250.00 due for filing this Brief under small entity status, also enclosed is a check to cover the fee required pursuant to §1.136(a) to extend the period for filing this Brief to March 2, 2005. No other fees are believed due. However, if that is not the case, please charge any additional fees or credit overpayment to Merchant & Gould Deposit Account No. 13-2725.

Respectfully submitted,

SIGNATURE OF ATTORNEY

Dated: March 2, 2005

23552
PATENT TRADEMARK OFFICE

David D. Wier, Attorney Reg. No. 48,229
MERCHANT & GOULD P.C.
P. O. Box 2903
Minneapolis, MN 55402-0903
(303) 357-1647

IX. CLAIMS APPENDIX

1. Apparatus for recognizing a string of characters of hand written text in an image loaded in a computing system, the apparatus comprising:

holistic recognition means for recognizing the string of characters as a whole and generating a first answer list and a segmentation list, the first answer list containing a plurality of recognition answers for the string of characters in the image each answer having a confidence value that the answer is correct, the segmentation list containing segmentation information separating each character in the answers;

analytical recognition means responsive to the segmentation list for recognizing a plurality of characters individually and generating a second answer list for the string of characters in the image each answer having a confidence value that the answer is correct; and

means responsive to the first answer list and the second answer list for finding the best recognition answer for the string of characters.

2. In a computing system for processing information loaded as cursive text, a method for recognizing the cursive text to provide digital information corresponding to the cursive text, the method comprising:

loading into the computing system an image of an input phrase of cursive text;

identifying features of the input phrase, each feature representing at least a portion of a character in the input phrase;

matching features of the input phrase against features of a plurality of reference phrases and generating a holistic answer list containing as answers reference phrases that are most similar to the input phrase along with a confidence value, the confidence value for each answer being a measure of similarity between features of the input phrase and the features of the reference phrase;

constructing a character segmented features list from the features of the input phrase and from the holistic answer list, the character segmented features list being a list of character feature sets segmented by characters in each answer from the holistic answer list;

translating the image of the input phrase into images of ~~a~~ characters segmented according to answers in the holistic answer list based upon the character segmented features list;

analytically recognizing characters in the input phrase from the images of characters segmented according to answers in the holistic answer list and generating an analytical answer list containing analytical answers for the input phrase, each analytical answer having a confidence value as a measure of the similarity between a characters in the analytical answer and characters in a reference phrase; and

finding the best recognition answer from the answers on both the holistic answer list and the analytical answer list.

3. In a handwritten character recognition system a method for recognizing an input word of handwritten text in an image provided to the recognition system, the method comprising:

identifying from the input word image an input string of metastrokes where each metastroke represents a portion of an alphanumeric character in the text;

storing the input string of metastrokes as character feature images;

comparing as a whole the input string of metastrokes to a prototype string of metastrokes for reference words to generate a first recognition answer list having a plurality of possible answers;

creating a plurality of character segmentation hypothesis based on character segmented metastrokes for answers in the first recognition answer list;

translating each character segmentation hypothesis into character cutout images of the input word;

recognizing characters from the character cutout images and generating a plurality of character variants for each character position in the input word based on each segmentation hypothesis;

interpreting the plurality of character variants of the input word for each segmentation hypothesis based on a vocabulary and generating a second recognition answer list having a plurality of possible answers; and

finding a best answer from the first and second answer lists as the recognition of the input word.

4. The apparatus of claim 1, wherein the string of characters is a series of alphanumeric characters and spaces that make up a word, a sequence of words, one or more numbers, or a mix of words, alphabetic characters and numbers.

5. The apparatus of claim 1, wherein means for finding comprises:

means for matching one or more recognition answers of the first answer list to one or more recognition answers of the second answer list to generate one or more matching answer pairs, each matching answer pair having an associated combined confidence value; and

means for evaluating the combined confidence value associated with each matching answer pair to designate a matching answer pair having a highest combined confidence value as the best recognition answer.

6. The apparatus of claim 5, wherein the combined confidence value associated with each matching answer pair is defined by an average of the confidence values of the recognition answer of the first answer list and the recognition answer of the second answer list of the matching answer pair.

7. The apparatus of claim 5 , wherein the means for finding comprises:

means for testing the highest combined confidence value against a next to highest combined confidence value to define an answer separation value; and

means for rejecting the matching word pair associated with the highest combined confidence value as the best recognition answer if the answer separation value is less than a predetermined threshold value.

8. The apparatus of claim 1, wherein the means for finding comprises:

means for evaluating a highest confidence value of the first answer list and a highest confidence value of the second answer list against a probability algorithm to identify the best recognition answer for the string of characters.

9. The method of claim 2, wherein the input phrase and each reference phrase is a series of alphanumeric characters and spaces that make up a word, a sequence of words, one or more numbers, or a mix of words, alphabetic characters and numbers.

10. The method of claim 3 further comprising:

identifying each of the plurality of possible answers of the first recognition answer list with a metastroke confidence value corresponding to a degree of similarity between the metastrokes representing the input word and the prototype string of metastrokes associated with each possible answer in the first recognition answer list; and

identifying each of the plurality of possible answers of the second recognition answer list with a confidence value based on a character recognition confidence value of each character variant in each possible answer in the second recognition answer list, the character recognition confidence value corresponding to a degree of similarity between the character variant and the matched character cutout image.

11. The method of claim 10, wherein the operation of identifying each of the plurality of possible answers of the second recognition list comprises:

combining the character recognition confidence value of each character variant in each of the plurality of possible answers of the second recognition answer list to generate a resultant confidence value for each of the plurality of possible answers.

12. The method of claim 11, wherein the finding operation comprises:

matching one or more possible answers of the first recognition list to one or more possible answers of the second recognition list to produce one or more matching answer pairs;

combining the metastroke confidence value associated with the possible answer of the first recognition answer list and the resultant confidence value associated with the possible answer of the second recognition answer list in each matching pair to define a combined confidence value for each pair; and

designating the matching answer pair having a highest combined confidence value as the recognition of the input word.

13. The method of claim 12, wherein the finding operation further comprises:

testing the highest combined confidence value against a next to highest combined confidence value to define an answer separation value; and

rejecting the matching word pair associated with the highest combined confidence value as the recognition of the input word if the answer separation value is less than a predetermined threshold value.

X. EVIDENCE APPENDIX

None

XI. RELATED PROCEEDINGS APPENDIX

None